

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) Method of preparing monodisperse polymer particles by free radical polymerization or copolymerization of hydrophobic monomers in a water-based system in the presence of cyclodextrin, ~~characterized in that~~ wherein said free radical polymerization is performed with a semi-continuous addition of monomer, ~~which should be absent before initiating the polymerization reaction~~ wherein an initiator is added to said water-based system prior to addition of said monomer, and in that a total solid contents is present of less than 30% by weight in said water-based system.

2. (Original) Method according to claim 1, wherein preparing monodisperse polymer particles by free radical polymerization or copolymerization of hydrophobic monomers in a water-based system proceeds in the presence of β -cyclodextrin.

3. (Original) Method according to claim 1, wherein said free-radical polymerization is initiated by a persulfate initiator.

4.(Original) Method according to claim 1, wherein said free-radical polymerization is performed via seeded emulsion or dispersion polymerization.

5.(Original) Method according to claim 1, wherein said polymerization is performed in the absence of addition of any ionic surfactant.

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6.(Original) Method according to claim 1, wherein said hydrophobic monomer is a compound selected from the group consisting of styrenics, acrylonitrile, methacrylonitrile, acrylates, methacrylates, methacryl amides, acrylamides, vinylamide, maleimides, vinyl ethers, vinyl esters, monoalkymaleates, dialkyl maleates, fluorinated acrylates, fluorinated methacrylates, dienes and derivatives thereof.

7.(Currently Amended) Method according to claim 1, wherein said hydrophobic monomer is a compound selected from the group consisting of styrene, methylmethacrylate, ~~vinylacetate, vinyl versatate,~~ N-phenyl maleimide, divinylbenzene, ethyleneglyol diacrylate, 2,2,2-trifluoroethylacrylate, 2,2,2-trifluoroethyl methacrylate, vinylcaprolactam, acrylonitrile, vinyl acetate, N-benzyl methacrylamide, N-benzyl maleimide and vinyl versatate.

8.(Original) Method according to claim 1, wherein said monodisperse polymer particles have an average particle size between 0.02 μm and 20 μm .

9.(Previously amended) Monodisperse polymer particles, prepared according to the method of claim 1.

10.(Canceled)

11.(New) A device comprising monodispersed polymer particles of claim 1.

12.(New) The device of claim 11 wherein said device is selected from a group consisting of inks, toners, photonic crystal films, thermal printing plate for computer-to-plate or computer-to-press applications, inkjet media, display, a photographic films, and a spacing agent.

13.(New) A process for preparing monodisperse polymer particles by free radical polymerization or copolymerization of hydrophobic monomers comprising the steps of:

forming an aqueous solution of cyclodextrin and initiator; and

adding said hydrophobic monomer to said aqueous solution semi-continuously; wherein said aqueous solution comprises a total solid contents of less than 30% by weight.

14. (New) The process for preparing monodisperse polymer particles by free radical polymerization or copolymerization of hydrophobic monomers of claim 13, wherein said cyclodextrin is β -cyclodextrin.

b1 15. (New) The process for preparing monodisperse polymer particles by free radical polymerization or copolymerization of hydrophobic monomers of claim 13, wherein said initiator is a persulfate initiator.

16. (New) The process for preparing monodisperse polymer particles by free radical polymerization or copolymerization of hydrophobic monomers of claim 13, wherein said free-radical polymerization is performed via seeded emulsion or dispersion polymerization.

17. (New) The process for preparing monodisperse polymer particles by free radical polymerization or copolymerization of

hydrophobic monomers of claim 13, wherein said polymerization is performed in the absence of addition of any ionic surfactant.

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18. ~~(Original)~~ The process for preparing monodisperse polymer particles by free radical polymerization or copolymerization of hydrophobic monomers of claim 13, wherein said hydrophobic monomer is a compound selected from the group consisting of styrenics, acrylonitrile, methacrylonitrile, acrylates, methacrylates, methacryl amides, acrylamides, vinylamide, maleimides, vinyl ethers, vinyl esters, monoalkymaleates, dialkyl maleates, fluorinated acrylates, fluorinated methacrylates, dienes and derivatives thereof.

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19. (New) The process for preparing monodisperse polymer particles by free radical polymerization or copolymerization of hydrophobic monomers of claim 13, wherein said hydrophobic monomer is a compound selected from the group consisting of styrene, methylmethacrylate, N-phenyl maleimide, divinylbenzene, ethyleneglyol diacrylate, 2,2,2-trifluoroethylacrylate, 2,2,2-trifluoroethyl methacrylate, vinylcaprolactam, acrylonitrile, vinyl acetate, N-benzyl methacrylamide, N-benzyl maleimide and vinyl versatate.

20. (New) The process for preparing monodisperse polymer particles by free radical polymerization or copolymerization of hydrophobic monomers of claim 13, wherein said monodisperse polymer particles have an average particle size between 0.02 μm and 20 μm .
